

STRUCTURAL ADJUSTMENT OF ROMANIAN FOREIGN TRADE

CONSTANTIN ZAMAN

Société Française de Réalisation, d'Etudes et de Conseils, Paris,
and Centre for Social and Economic Analysis CASE, Warsaw

1. Introduction

Among other reforms undertaken by transition countries, foreign trade liberalisation is one of the most dynamic areas of economic transformation. In a relatively short period of time, these countries abandoned the inward-oriented trade within CMEA for an open system of commercial exchange, with Western Europe becoming one of the most important trade partners.

The last decade before transition, the socialist economies were at least as export-oriented as developing countries (Krugman and Obstfeld, 1977), with both groups following a similar path. The collapse of communist regimes induced a dramatic fall in exports. Mainly due to the abandonment of the CMEA agreement, their proportion of GDP declined to less than one quarter. However, foreign exchange liberalisation allowed for a quick increase of trade volume in the case of transition countries because their degree of openness and diversification is close to the level existing in Western Europe (Havrylyshyn and Al-Atrash, 1998).

The evolution of foreign trade for countries in transition is characterised by two main tendencies: a reorientation of exchange towards western markets (mainly EU countries) and a respective increase in trade deficits. Brenton (1999) shows that the significance of EU markets for transition countries is already comparable to that of other West European countries like Greece or Spain. The trade deficits are the direct consequence of former CMEA terms of trade that did not emanate from efficiency criteria. The trade deficit problem is delicate. A deficit does not necessarily imply that a country records a bad position in the terms of foreign trade as long as the national income is sufficiently high and the inflow of financial capital is significant. The trade balance deficit should be therefore considered within the overall context of the balance of payments deficit. At the same time, the principal qualitative element that differentiates transition countries is the trade deficit. More important than the deficit's level is a country's ability to finance it.

Given the above considerations, foreign trade is more complex and more important than the simple exchange of commodities between a transition country and the rest of the world. Foreign direct investment is a crucial component that should be mentioned when analysing trade performance, since this element represents an essential part of the current account. On the other hand, it is argued that foreign trade is the main factor explaining the output decline in the beginning of transition. Brenton (1999) states that the collapse of CMEA contributed a large proportion of the fall of GDP, while Havrylyshyn and Al-Atrash (1998) show that those countries that liberalised foreign trade faster achieved the most progress in economic reforms. Consequently, the faster the restructuring of foreign trade (geographically and in terms of competitiveness), the quicker economic recovery is achieved and economic growth becomes possible.

Other opinions perceive the link between foreign trade performance and domestic growth differently. Kaminski, Wang and Winters (1996) conclude that trade liberalisation alone does not improve the performance of transition countries, even if this measure is

accompanied by a significant devaluation of domestic currencies. The necessary conditions for improving the terms of trade rely on liberalisation of domestic prices, cutting down inflation and reducing state control over the economy.

In this paper we analyse the evolution of Romanian foreign trade during transition. The aim of our analysis is to detect the main inconsistencies of trade policies and to formulate policy recommendations for improving the Romanian terms of trade.

2. Structural Changes of Romanian Foreign Trade During Transition

Since the beginning of transition, Romanian trade policies have been conducted in two opposite directions: a significant liberalisation of transactions (early 90's) by eliminating state monopolies and an intensification of restrictions (mainly in 1994 – 1996) in order to control the increasing trade deficit. Structurally, the external trade is characterised by both labour-intensive and capital-intensive activities. Cheap labour existing in the Romanian economy has created a certain comparative advantage for domestically produced commodities, especially in light industry, wood processing, and footwear. Capital-intensive activities are the result of the industrial structure of the Romanian socialist economy, with a considerable weight on iron and steel plants and petrochemical conglomerates. A general characteristic of all goods produced is the relatively high intensity of energy incorporated in the production of commodities.

Romanian exports are highly concentrated: apparel, clothing, iron and steel account for more than one quarter of total exports. On the other hand, machinery, equipment and raw materials represent the main items of imported goods--more than 40% of total imports. Both imports and exports have been significantly influenced by a relatively inflexible exchange rate policy that increased the anti-export bias of the trade regime. Cyclical overvaluation and under-devaluation of domestic currency has induced a corresponding evolution of imports and exports. The overall structure of economic activities has been constantly reflected in the structure of foreign trade. The significant role of state companies, highly dependent on imported raw materials, translated into an exchange rate regime aimed to provide cheap inputs to public enterprises through an overvalued currency.

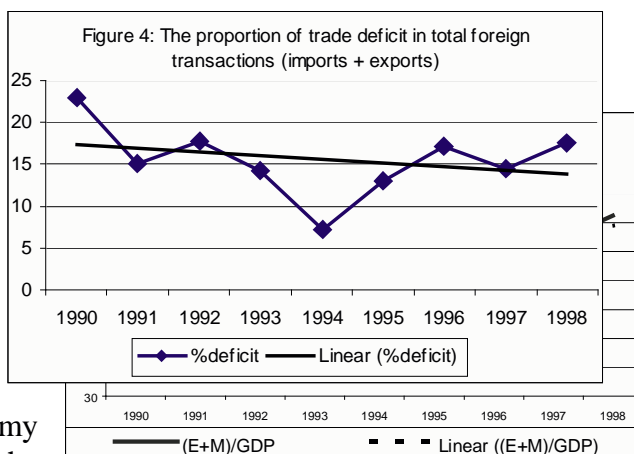
2.1. The Evolution of Foreign Trade During Transition

Over the period of transition, the policies adopted for adjusting foreign trade have been aimed to bring a geographical diversification of exchange and intra-industry restructuring of exported and imported commodities. The first goal has been easier for Romania to achieve since exports were already oriented, to a certain degree, towards western markets during the socialist period. However, the adjustment of traded goods is more difficult because it requires a corresponding restructuring of all economic activity, especially with respect to exported goods.

After almost ten years of adjustment, Romanian foreign trade can be characterised by the following elements:

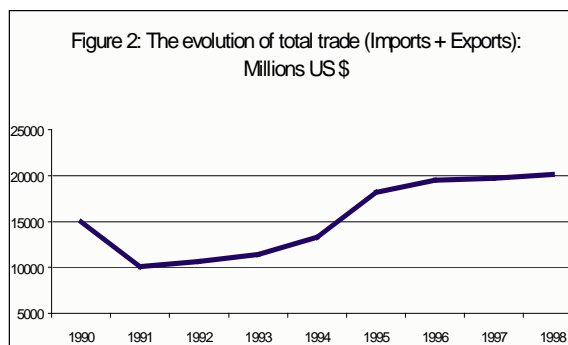
1) An Increasing Proportion of Trade Volume in GDP

Since the beginning of transition, the share of trade in GDP has constantly increased (Figure 1) from 40.21% in 1990 to 61% in 1998. This tendency is the direct result of trade liberalisation policies adopted by Romanian authorities aimed to ensure the necessary openness of the economy towards world markets. However, the increasing weight of foreign trade is also the consequence of the decline of Romanian GDP in real terms. At the same time, the growth rate of imports is constantly higher than that corresponding to the volume of exports. Trade liberalisation policies have therefore favoured the inflow of commodities from abroad, while the amount of goods shipped to the rest of the world remains relatively low.

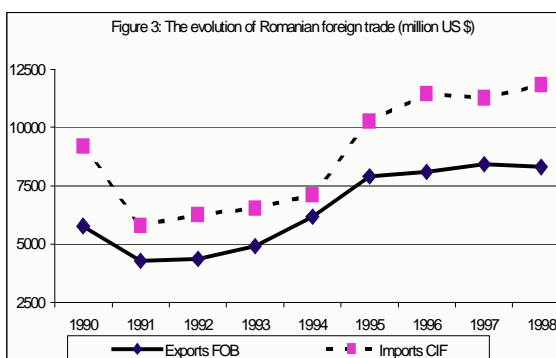


2) a steady state equilibrium of foreign transactions

The increasing weight in GDP of total foreign trade has been accompanied by a relative stabilisation of its volume during the last three years, when the total value of imported and exported goods reached about US \$20000 million per year (Figure 2). This level reflects the current trade capacity of the Romanian economy, characterised by a steady state equilibrium of both imports and exports (Figure 3). This equilibrium corresponds to a trade deficit of about 15% of total trade (Figure 4), which implies that the current Romanian economy exhibits an under-capacity of exported commodities relative to the necessary amount of imports.



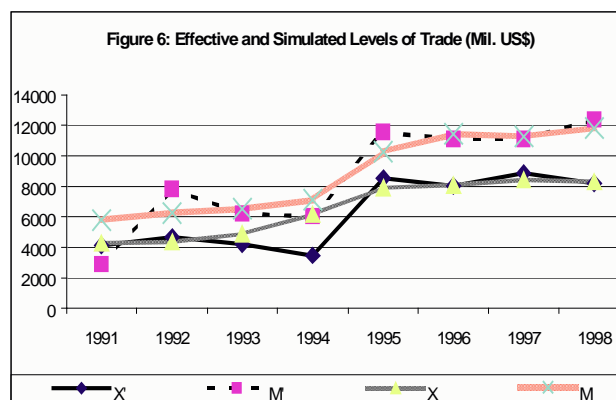
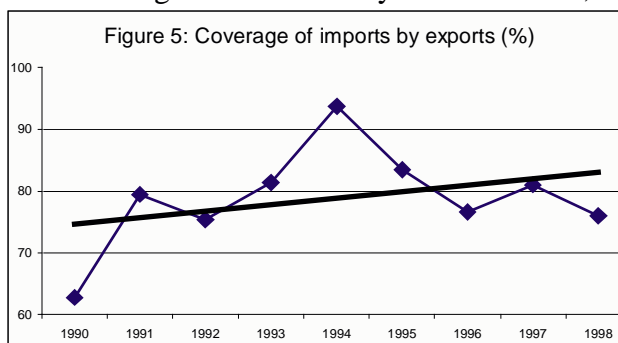
Under normal circumstances, a trade balance deficit does not necessarily mean that the economy is characterised by a low level of efficiency. Trade deficits are rather a problem of mercantilist politicians. From an economic point of view, only the ways of financing deficits are significantly important. In general, there are net exporter countries and net importer economies. In the latter case, the country buys more goods from abroad than it sells with the difference being covered by external



borrowing. If investment policies are properly run, then future additional income coming from investing today will cover both the current and future deficit. However, if foreign borrowings are not wisely invested, credibility problems arise and the country will not be able to attract more inflows of capital and will be unable to finance its deficit. From this point of view, Romania has been constantly confronted with a lack of necessary international financial means. Foreign direct investment is the best indicator of a country's credibility and therefore its ability to finance a trade deficit. In 1996, the per capita FDI inflows in Romania were the lowest among Central and Eastern European Countries (US \$ 27), while Hungary (US \$ 205) and Slovenia (US \$ 175) recorded a level that was superior to that existing in Spain (US \$ 163).

It follows that Romania is currently a net importer country whose trade deficit is very difficult to be serviced. Unless a serious restructuring of the economy is undertaken, the existing deficit will further decrease the national income and a drastic cut in imports will be necessary. Since the highest proportion of imports is represented by technology and the major part of exports relies on light industry, iron and steel, it follows that the degree of competitiveness is relatively low in the economy. Exported goods belonging to light industry mean a low level of incorporated labour and, at the same time, a reduced level of physical capital incorporated in the production process. Iron and steel industries, although highly intensive in capital, are characterised by a low degree of manufacturing. In general, these commodities represent intermediate goods.

The above particularities are more evident when analysing the coverage of imports by exports (Figure 5). Although the trend is slightly increasing over time, this indicator shows the economy's low capacity to expand its exports for a given volume of imported goods. This is due to the economy's relatively high degree of dependence on imports, reflected by the average elasticity of GDP with respect to imports and exports. Over the transition period, on average, one additional US dollar of GDP is produced if US \$ 0.532 is imported, while only 0.405 from that unit dollar can be exported. It follows that the exporting potential of the economy is limited. Even if the GDP grows under current economic conditions, the trade balance will not improve. This is illustrated by simulated levels of exports (X') and imports (M') computed for the 1990 level of GDP over the whole period (Figure 6). Taking into account the GDP elasticities of imports and exports, and considering that the GDP would have remained the same since 1990, M' and X' give the level of exports and imports for a zero growth rate of real GDP over the whole period. It can



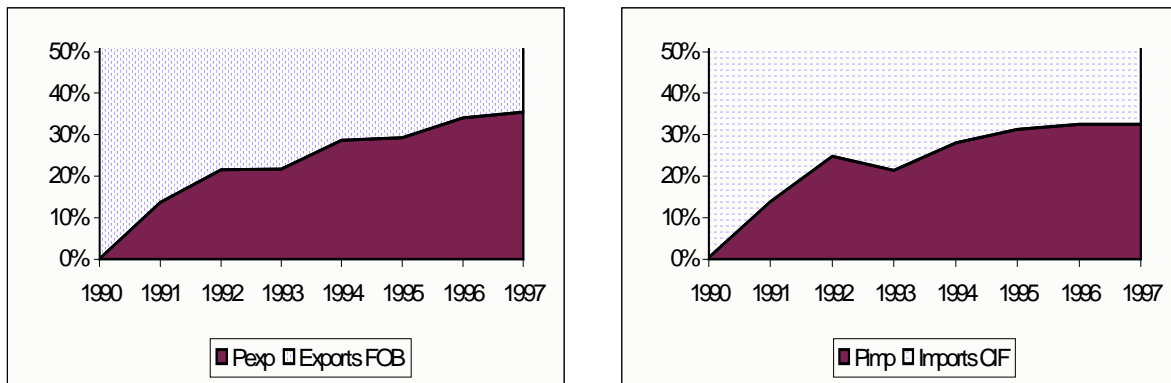
be easily seen that even for a higher level of GDP, there is no effective improvement in the terms of trade. The actual cumulative deficit (1991 – 1998) amounts to US\$ 19157 million, while in the case of the simulated level of imports and exports this indicator is US\$ 18952.

Consequently, even if it might be possible to provide some economic growth, the current structure of the Romanian economy will never improve the trade balance deficit. Romania continues to be highly dependent on imports--more energy and raw materials during the first 6 years of transition and more equipment at present--but the economy cannot transform the imported commodities into exports at a sufficiently high scale.

3) An Increasing Private Sector Share of Foreign Transactions

Following the general tendency of the economy, private sector contributions to foreign commercial transactions are increasing over time (Figure 7). However, this particularity should be interpreted with caution for two reasons. First, its weight increase has been rather steady during the last years. Secondly, a significant part of privately exported goods are in fact produced by state firms. Private enterprises are therefore only intermediaries and not effective producers.

Figure 7: The Weight of the Private Sector in Foreign Trade



The above characteristics lead to certain conclusions regarding the foreign trade activity of Romania.

- Trade liberalisation is relatively high and, together with price liberalisation, has induced an increase in commercial operations.
- Liberalisation of trade and prices, although necessary, is incomplete without a deep restructuring of all activity in order to equilibrate the amount of imports with the quantities exported.
- Insufficient restructuring of the economy makes Romania a net importer, thereby recording a permanent trade deficit. This deficit is difficult to be serviced because the inflows of foreign capital are modest and FDIs are still very low.
- The difficulty in borrowing from abroad is mainly the result of inadequate investment policies in the economy.

- A significant improvement of the terms of trade is possible only by adopting corresponding policies aimed to adjust both geographically and structurally the commodities traded with the rest of the world.

2.2. The Geographical Adjustment of Foreign Trade

The reorientation of trade after the collapse of CMEA towards new markets has been easier for Romania because the country was less dependent on Russia and a significant proportion of exports were already carried out with western partners during socialism. Romania therefore had a comparative advantage regarding the geographical structure of its trade. Unfortunately, this advantage has been partially lost afterwards because of two reasons:

- **The Slow Adjustment of Trade Principles** The liberalisation of foreign exchange and consequent economic openness have completely changed the trading rules, especially with respect to the price level and quality of exported commodities. The internal price of exports that was set on specific principles during socialism is not available anymore. On the other hand, economic openness has induced a significant exposure for domestic firms to international competition. This is equivalent to a significant shock spread over all activities in the economy. Exclusively constrained by the supply side during socialism, the economy is for the first time confronted with the demand side. It takes a certain amount of time to adjust the production possibility frontier to the new conditions. As a result, the supply response is lagging far away from demand impulses. At the same time, price liberalisation of domestically produced commodities has induced a drop in external demand.
- **The Rising Competition from other Socialist Countries who also Reoriented their Trade towards Western Clients** With some of these competitors more quickly restructuring their internal economic activities, Romania has lost some of its traditional western markets (mainly during 1990 – 1992). In 1996, the country was ranked fifth place with respect to exports to the EU, after Poland, Slovenia, Hungary and the Czech Republic.

The geographical adjustment of foreign trade is usually analysed using the gravity model (Linneman, 1966), which relates the volume of exports recorded by a country i to the GDP level and population of the country recipient j and to the distance between the two partners. GDP represents a measure of national income (therefore a proxy of foreign demand for domestically produced commodities), while the distance gives an approximation of transportation costs. The population expresses the size of each country, given the empirical findings that a large economy (the USA, for instance) is generally self-sufficient to a higher extent than a small open economy.

The use of the gravity model for explaining the geographical adjustment of trade in transition countries is significantly limited by its weak theoretical foundations. Havrylyshyn and Al-Atrash (1998) used a variant of the gravity model for analysing the geographic diversification of trade in transition economies. The authors used as a dependent variable the proportion of exports in GDP and the real exchange rate. As an explanatory variable, they

utilised the index of progress in structural transformation. Their conclusions are rather striking, since the regression results prove that Poland records inefficient terms of trade, while Russia performs very well from this point of view, with both conclusions being opposite to the reality.

Another weakness of the gravity model comes from the fact that GDP is expressed in purchasing power parity terms. Estimating the GDP at the level of internal PPP always leads to an over-valuation of the indicator, since non-traded goods and services are generally undervalued in low income countries (Brenton, 1999).

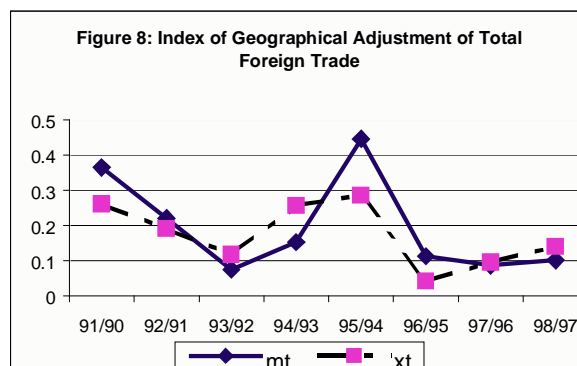
Given the above drawbacks of the gravity model, in order to analyse the extent to which Romanian foreign trade has been geographically adjusted over the transition period, we constructed an index of geographical adjustment of imports (m) and exports (x):

$$m_t = \frac{\sum_{i=1}^N \|(M_t)_i - (M_{t-1})_i\|}{M_{t-1}} \quad x_t = \frac{\sum_{i=1}^N \|(X_t)_i - (X_{t-1})_i\|}{X_{t-1}}$$

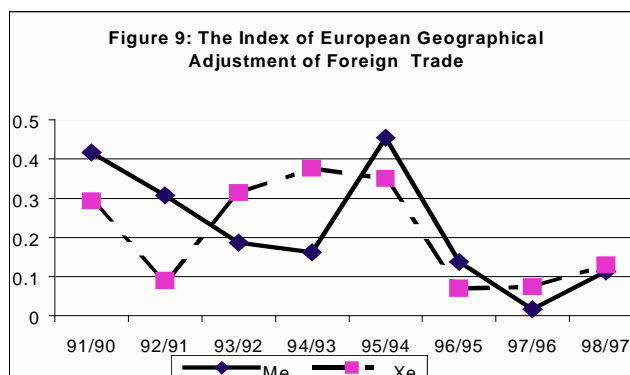
where $i = 1...N$ is the country's partner and t the period for which the index is calculated. It follows that the index expresses the cumulative changes in the quantity imported (exported) over two consecutive periods relative to the total amount of imports (exports) corresponding to the previous period. The changes are considered in absolute value in order to capture the overall effect of switching from one traditional market to a new market.

Foreign trade is geographically adjusted when a country records a relatively stable level of transactions after a certain number of periods during which the scale of quantitative changes is significant. The faster the drop of an indice's level, the quicker the geographical stabilisation is achieved.

In the case of Romania, the two indices are represented in Figure 8 and they are computed for three trade destinations (origins): developed countries, developing countries, and countries in transition. As can be seen, Romanian foreign trade has reached relative stability since 1996 after a period of significant movements among the three types of markets. In general, an index of 0,1 – 0,15 indicates a relatively high geographical stability of foreign trade. This level expresses the elements related to international effects that are independent from the internal capacity to carry out the transactions.



Romania has therefore adjusted its foreign transactions according to the existing economic conjuncture on

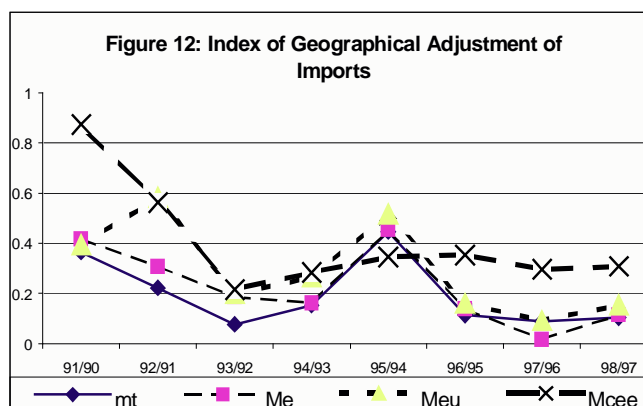
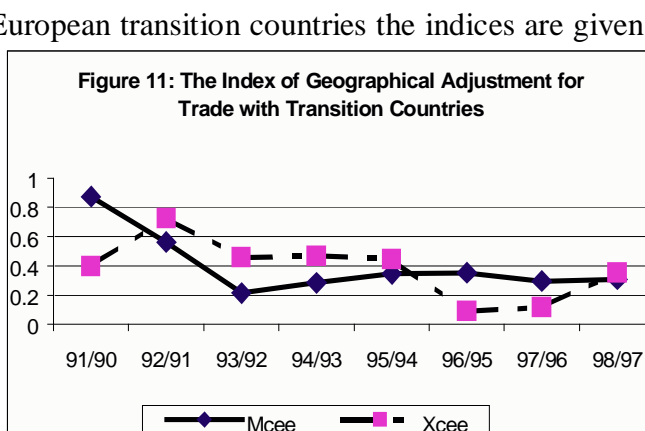
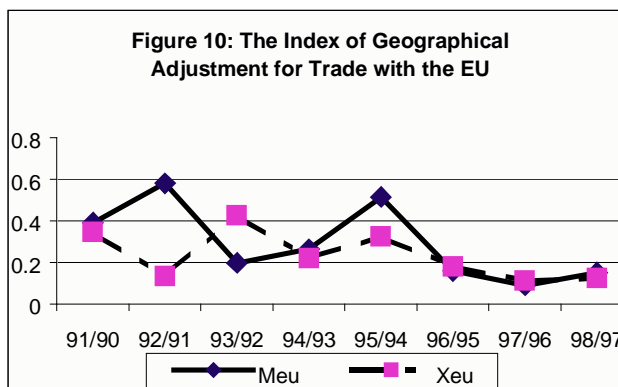


the world markets. Although geographically stable, the foreign trade is carried out on a less efficient basis since the exports are below the level of imports. This is due to the fact that the geographic adjustment has not been accompanied by a sufficient change in the commodity structure of exported goods.

Since a major part of Romanian foreign trade takes place with the rest of Europe, it is worthwhile to compute the two indices for trade carried out with the European Union, EFTA countries, and the other transition countries from Europe (Figure 9). It can be observed that the evolution of the two indices is similar, mainly in the case of imports. The adjustment of Romanian exports to European countries is more significant.

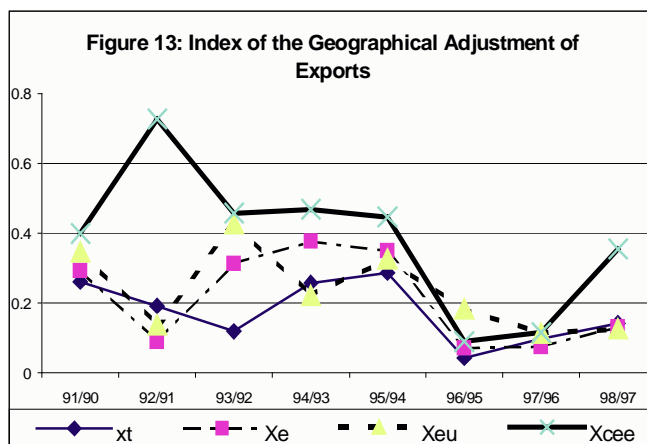
Finally, the two major blocks of trade partners within Europe are The European Union and the transition countries. Within each group, the evolution of geographical adjustment is important because it expresses the ability of the Romanian economy to find long-term partners in each type of market, given the new conditions of carrying out trade. In the case of the EU (15 countries), the two indices are represented in Figure 10, while for the 15 European transition countries the indices are given in Figure 11. While the trade with Western Europe is relatively stable and follows the tendency previously described, in the case of transition countries, only the change in imports is relatively constant over the last seven years. The exports are still unadjusted to this segment of the market, mainly due to continuous problems existing in this part of Europe (the war in former Yugoslavia, the breaking down of the former USSR, Czechoslovakia and Yugoslavia). Both imports and exports are characterised by a high volatility: the index of import adjustment is 0,308 in 1998, while in the case of exports the index reaches 0,354 for the same year.

A comparison of all indices of geographical import adjustments provides information about the uniformity of the process for different segments. Except for the imports coming from CEE countries, the rest of commercial relations in terms of imports are not only stable, but also



uniform (Figure 12). The adjustment of imports is uniform among various partners.

With respect to exported goods, the situation is similar (Figure 13). The relations with CEE countries are more unstable. This means that among traditional partners, Romania cannot easily find long-term markets. In general, the exports are more volatile than the imports, with the index of adjustment increasing slightly during the last three years. Romania is therefore still looking for stable markets for its products. Occasional exports represent a significant proportion of the total amount of exported commodities. This particularity also suggests that Romanian exports are far from properly restructured--a consequence of the low extent of internal restructuring of economic activities.



In Conclusion, Romanian foreign trade has been properly reoriented towards new markets, with Western Europe representing the main partner of commercial foreign exchange. The geographic adjustment, although a necessary condition for trade recovery, is not sufficient for improving the overall performance of the country. Intra-industry restructuring, measuring the extent to which the economy is able to exploit its comparative advantage, should accompany the reorientation of trade.

2.3. The Adjustment of the Trade Structure

The commodity structure of foreign trade expresses the main items that are exchanged with the rest of the world. Apart from geographical adjustment, a transition economy is constrained by the composition of imported and exported goods. Changes in this composition reflect the adjustment of overall economic activity so that the imports satisfy the effective needs of domestic agents, while exports are adjusted to the demand coming from abroad. A sufficient flexibility of activities with respect to foreign demand is a good approximation for the capacity of producers to also respond to domestic demand.

The economic literature provides several methods for evaluating the structural changes of foreign trade composition. Apart from the gravity model, which gives information about the trade potential of the economy, one way to measure the structural change is the similarity index:

$$\Phi = \sum_{i=1}^N \min(\alpha_{t,i}; \alpha_{t-1,i}) * 100$$

where $i = 1 \dots N$ is the product i exported and \forall the share of good i in total export at time t , as well as $t-1$. If over two consecutive periods the share of a commodity does not

change, its corresponding index is equal to 100. The larger the change in the overall index (N), the higher the change in the export structure of the country.

The similarity index for five transition countries (Bulgaria, Hungary, Poland, Romania and Russia) is computed by Brenton (1999) using around 1200 different commodities from the Harmonised System. The index is computed for exports to EU markets. For the sake of comparison, the author also includes Spain in his analysis. The main conclusion is that, less Russia, the transition economies have undergone significant changes in export structure. Commodities that comprised a large share of exports before 1989 now contribute to total exports to a much lesser extent. Although it follows the general tendency in this respect, Romania is the only country where the similarity index fell between 1995 and 1996. This suggests that, despite its efforts to adopt a new structure of exports, Romania is not able to maintain its level of exports to EU markets.

Another measure of structural adjustment of foreign trade is given by the intra-industry index, which measures the absolute difference between exports (X) and imports (M) for each commodity i , relative to the total amount of trade:

$$\Theta = 1 - \sum_{i=1}^N \frac{|X_i - M_i|}{X_i + M_i} * 100$$

Except for Russia, Brenton (1999) finds that in 1996 Romania recorded the lowest index of intra-industry restructuring among the same transition countries previously analysed (20.9)¹. Since this index measures the difference between exports and imports for the same commodity, low values imply high *intra-industry* exchange. This means that the foreign trade is carried out on a product diversification basis by exporting and importing similar goods. The reason for such transactions is to obtain a wider range of commodity supplies on domestic markets. Similarly, if the index takes high values, the economy displays *significant inter-industry* exchange, meaning that the country exports mainly those goods for which its economy has a real comparative advantage and imports those commodities that are too expensive to be produced domestically. In the first case, the exports are therefore good substitutes for imports, while the inter-industry trade is mainly characterised by a high complementarity of commodities imported and exported. Consequently, Romania trades a large proportion of the same types of goods which implies a low level of specialisation of economic activities within the context of international commercial exchange. This conclusion is supported if we analyse the volume of imports and exports for several categories of commodities during the last two years (Table 1).

Table 1: Imports and Exports of Selected Categories (US \$ million)

	1997			1998		
	Export	Import	%	Export	Import	%
Vegetable Products	164	170	96.5	181	225	80.4
Textiles	1942	1565	124.1	2161	1824	118.5

¹ Bulgaria 25.6 ; Hungary 45.6 ; Poland 34.9.

Stone, Plastic, Ceramics, Glass	151	143	105.6	157	163	96.3
Transport Means	448	384	116.7	427	485	88.0

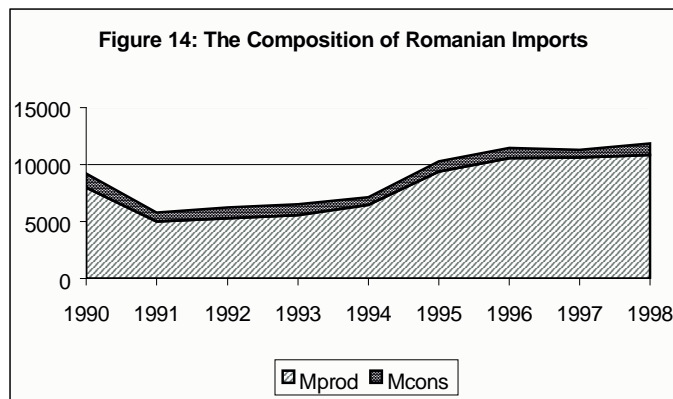
Source: National Commission for Statistics, Quarterly Statistical Bulletin 4/1998

In order to have a comparable analysis of both the geographic and structural adjustment of Romanian foreign trade, commodity restructuring can be measured by an index of structural adjustment, computed both for imported and exported goods:

$$m_t = \frac{\sum_{i=1}^N \|(M_t - M_{t-1})_i\|}{(M_{t-1})_i} \quad x_t = \frac{\sum_{j=1}^K \|(M_t - M_{t-1})_j\|}{(M_{t-1})_j}$$

where $i = 1 \dots N$ is the good imported (exported). The index of structural adjustment shows how fast the economy is able to adapt to the new conditions. Once new markets are found (if possible), the economy is forced to correspondingly change the structure of its offer in order to maintain its access in those markets in terms of exports. Changing the export structure requires corresponding changes in the structure of production, and therefore – to a certain extent - a new structure of imported goods.

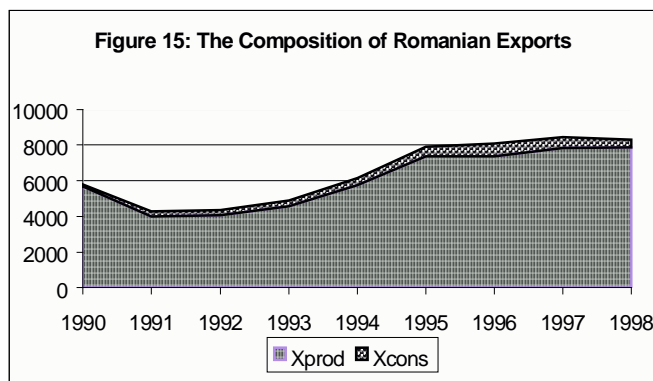
The stability of foreign trade through its structure is increased when the level of the two indicators is relatively low for a long period of time. As it can be seen from Figure 14, this stability² was reached by the Romanian economy, although this was possible only after a certain period of time (more than six years of transition). This is the result of a gradualist approach to internal reforms, but also the consequence of increasing trade restrictions during the period 1993 – 1996. It can be also seen that the export changes are relatively smooth, which represents clear evidence of low-scale restructuring of the economy, while imports are more volatile. At present, both imports and exports record a steady state equilibrium in terms of their structure, but at a relatively constant trade deficit, which affects the balance of payments and correspondingly reduces the national income.



The dual adjustment of Romanian foreign trade corresponds therefore to a bad equilibrium for the economy. Although well-oriented and having a normal commodity structure, foreign transactions suffer from a lack of competitiveness for Romanian goods which leads to a loss of market share, especially within the European Union. The loss of markets for exports is generally determined by two factors: a contraction of the demand (market effect), and a respective drop in competitiveness (competitiveness effect). Brenton (1999) analyses the two factors by dividing the transition period into two intervals: 1990-

² The goods considered in the calculation of the two indices are listed in Appendix 1.

1992 and 1993-1994. These periods correspond to the time necessary for adjusting the foreign trade, both geographically and structurally. Using constant market share analysis³³, the author concludes that Romania lost an important segment of markets during the first period due to a significant lack of competition. Between 1990 and 1992, in Bulgaria, Hungary and Poland the competitiveness effect strongly



dominates the market effect, while in Romania the situation is exactly opposite. This suggests that the three countries focused in the beginning of transition on quality improvements for exported goods--the only real factor that can increase the foreign demand for domestically produced commodities. During the second sub-period, the market effect dominates in the case of Bulgaria, Hungary and Poland, suggesting that the initial improvement effectively led to higher demand. In Romania, the competitiveness effect dominates the exports to the EU. Therefore, the country lags after the other countries with respect to the effectiveness of foreign trade policies.

Contrary to Brenton's analysis, Maliszewska (1998) finds a significant improvement of Romanian terms of trade in the beginning of transition (mainly 1991) when a strong devaluation took place. The author uses the real effective exchange rate as an explanatory variable and her estimations are relatively optimistic for 1998, compared to the effective situation.

In our analysis, the competitiveness will be related to sectoral composition of imports and exports, therefore understood as a measure of the effective capacity of the economy to sustain imports by a corresponding level of exports. From this point of view, Romanian imports are principally oriented towards intermediate products (raw materials, energy, equipment), while the proportion of food consumption commodities remains low over the whole period (Figure 14). The same applies for exports (Figure 15). Both imports and exports are relatively constant and significantly low over the whole period in terms of food consumption. It follows that the agriculture and food industry have a low contribution to Romanian foreign trade; the only important sector is therefore manufacturing. In this respect, the analysis of imported and exported commodities should take into account the degree of complexity of traded goods. This element expresses the level of manufacturing incorporated

³³ Constant Market Share (CMS) Analysis implies the computation of a corresponding index that relates the change in exports of a country j to total imports of the target region (or country), and to the share of that country in total imports of the region for each product i exported:

$$\Delta x = \sum_{i=1}^N s_{ij}(\Delta X_i) + \sum_{i=1}^N X_i(\Delta s_{ij})$$

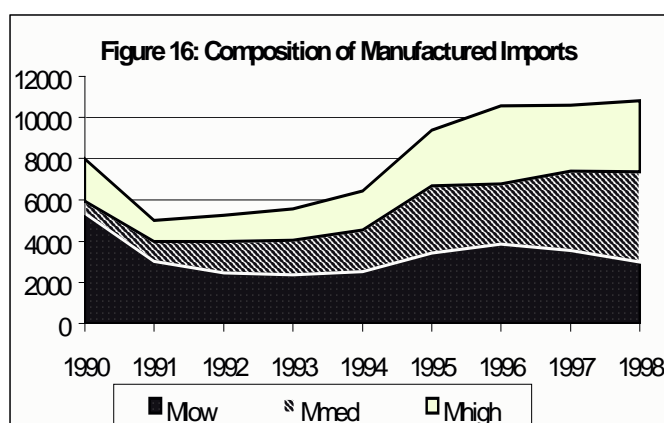
where x represents the change in the country's exports, s_{is} is the share of country j in total EU imports of good i , and X_i the total EU imports of commodity i .

in a commodity and we can distinguish three such levels in the combined nomenclature of foreign trade:

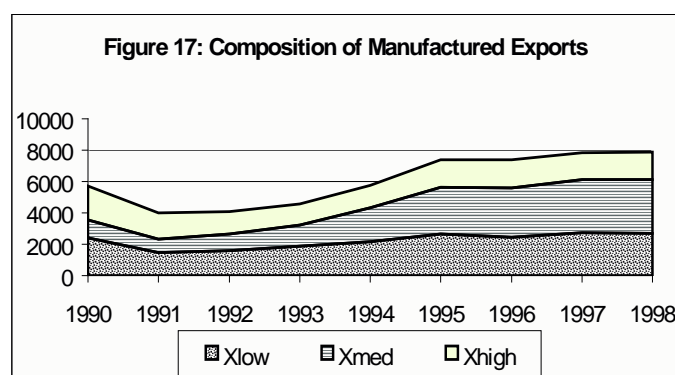
- goods with a high complexity (Mhigh for imports, Xhigh for exports);
- goods with a medium complexity (Mmed and Xmed);
- goods with a low complexity (Mlow and Xlow).⁴

The use of this classification is evidently important both for imported and exported goods. In the case of imports, the degree of complexity should be related to the existing level of technological progress of the country. For a developed country, imports with a low degree of complexity are more suitable, while complex products (machinery and equipment) are more needed from abroad in the case of a less developed economy in order to improve its technological level. On the other hand, complex exports incorporating a high degree of manufacturing (and therefore with significant value added) are characteristic for countries recording a high technological level. In the case of less developed economies, natural resources represent the main commodity exported to the rest of the world.

The product complexity of foreign trade therefore represents a proxy for the development potential of the economy. Considering this aspect, we can observe (Figure 16) that the composition of Romanian imports over the transition period is changing: while in 1990 more than half of total manufactured imports represented raw materials—energy and other goods aimed to be processed by Romanian firms—in 1998, the import composition was relatively uniform, with each component having almost the same proportion. This tendency is due to the following factors:



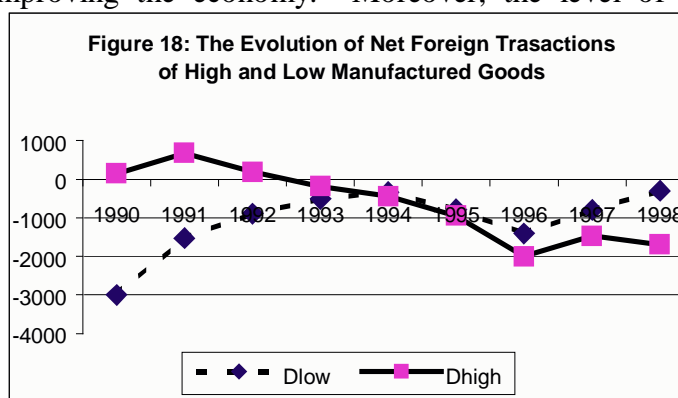
- the decline of Romanian industry, reoriented towards consumption commodities;
- liberalisation of the exchange rate: the abandonment of real appreciation made imports more expensive;
- a change of export structure: the amount of highly manufactured exports has not increased, with their proportion in total exports declining from 38% in 1990 to 22% in 1998 (Figure 17);



⁴ The categories of commodities included in each group are presented in Appendix 2.

- the technological restructuring of Romanian firms, which required more equipment and machinery to be imported.

Since a high and low complexity of traded commodities is a measure of the development potential of the economy, the evolution of the two categories of goods shows to what extent technical progress is improving the economy. Moreover, the level of net transactions of each category (exports minus imports) over time shows how fast the economy is switching from resource-oriented to manufactured exports--from technological imports to less complex imported goods. In Figure 18, we can see that Romania starts the transition with a deficit of low manufactured transactions (Dlow) and with a small surplus of highly complex traded goods (Dhigh).



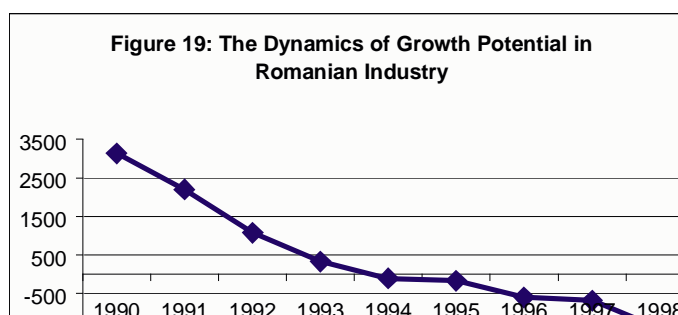
Apparently, this situation corresponds to a high level of industrial development at the beginning of transition which declines afterwards. From a net exporter of complex industrial products to a net importer of resources, the economy switches to more technological imports and to a higher proportion of low manufactured goods. In reality, this evolution represents the only significantly positive element of foreign trade in the economy. The initial inflow of raw materials, aimed to fuel the large industrial plants inherited from socialism, is declining steadily as long as the country focuses more on technologies for restructuring the economy. The net transactions of highly manufactured goods became negative in 1993 which is due to a loss of traditional markets for equipment (mainly in developing countries and the former CMEA) and to changes undertaken in the structure of economic activities. However, the government objective to promote growth at any price since 1994 induced an increase in the amount of low manufactured goods imported in order to provide the necessary inputs for state enterprises.

The declining path of net transactions in the case of highly manufactured commodities is the result of two factors: technological restructuring objectives, implying a higher amount of imported equipment, and a serious decline in the weight of exports within this category (Figure 17).

The evolution of difference d between the two types of transactions

$$d = D_{\text{high}} - D_{\text{low}}$$

expresses the dynamics of the growth potential for industrial activities in the economy through foreign trade. For a transition country, at the beginning of this period the indicator declines because of technological restructuring which requires a



higher volume of imported equipment. Once the economy is restructured, d should increase because the imported technology starts to produce (and therefore export) highly manufactured goods. In the case of Romania, d decreased until 1994 (Figure 19), when for the first time the economy recorded some positive growth. Unfortunately, this recovery was only temporary. In 1996 d started again to decline because of insufficient and inefficient restructuring undertaken in the economy.

3. The Main Determinants of Romanian Foreign Trade

As we have seen, the structural composition of imports and exports is a measure of the economic potential of a country and its development capacity. A developed economy records efficient terms of trade which fuels the long run growth of all economic activities. Given the strong interdependence and reciprocal influence between foreign trade and development, foreign transactions in the case of Romania should be analysed through the main economic factors that determine their transitional evolutions. The correlation between the volume of exports (imports) and economic activity, expressed by GDP level (Figure 20) or by industrial production (Figure 21), is obvious. Although both exports and imports increase when more goods are produced in the economy, the foreign transactions are bounded by the limited trading capacity of the economy (see section 2.1). This limitation is less evident in the case of industrial production, which implies a relatively higher potential (than effectively used) in terms of foreign trade.

Figure 20: The Correlation between GDP and Trade Volume

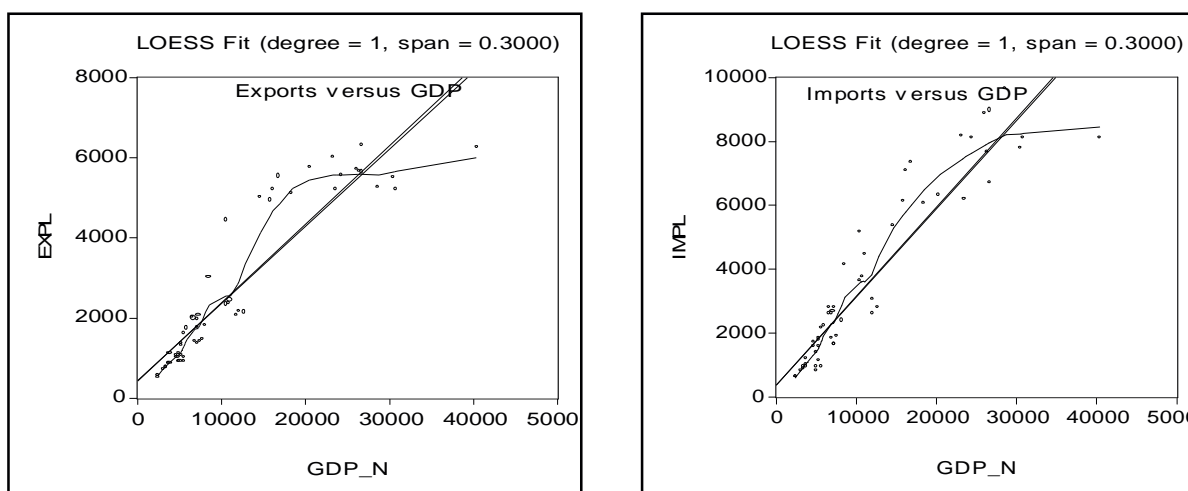
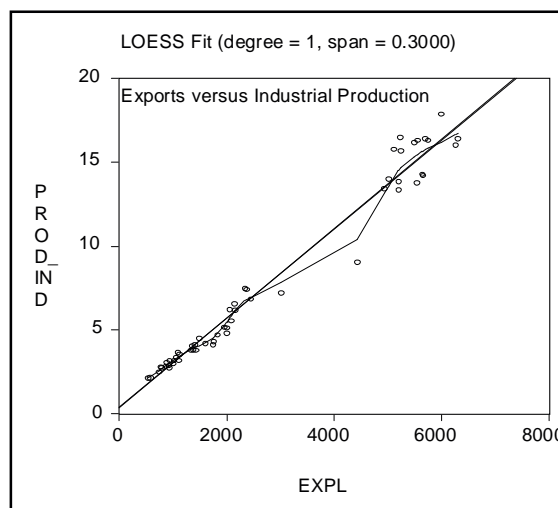
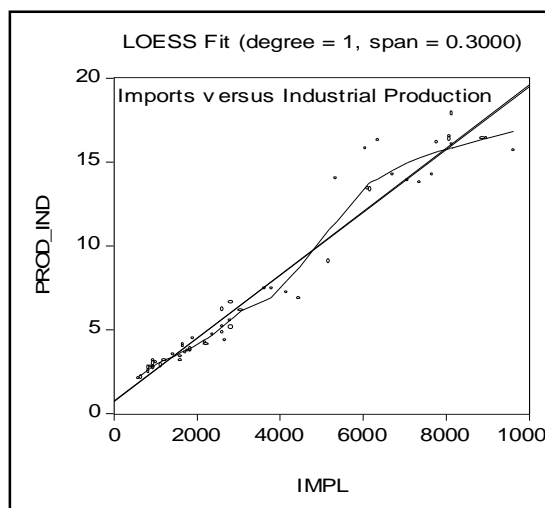


Figure 21: The Correlation between Industrial Production and Trade Volume



The influence of other factors on the level of exported and imported goods is less evident and it should be determined econometrically. In the case of Romania, the economic variables explaining the level and dynamics of exports (expressed in ROL) are the exchange rate (EXR), value added tax (VAT), the money multiplier (MU), and the level of exports from the previous period (the regression results are provided in Table 2, while the actual, fitted and residual values are given in Figure 22).

Estimation Equation:

=====

$$\text{LOG(EXPORT)} = C(1) + C(2)*\text{LOG(EXR(-1))} + C(3)*\text{LOG(VAT)} + C(4)*\text{LOG(EXPORT(-1))} + C(5)*\text{LOG(MU(-1))}$$

Substituted Coefficients:

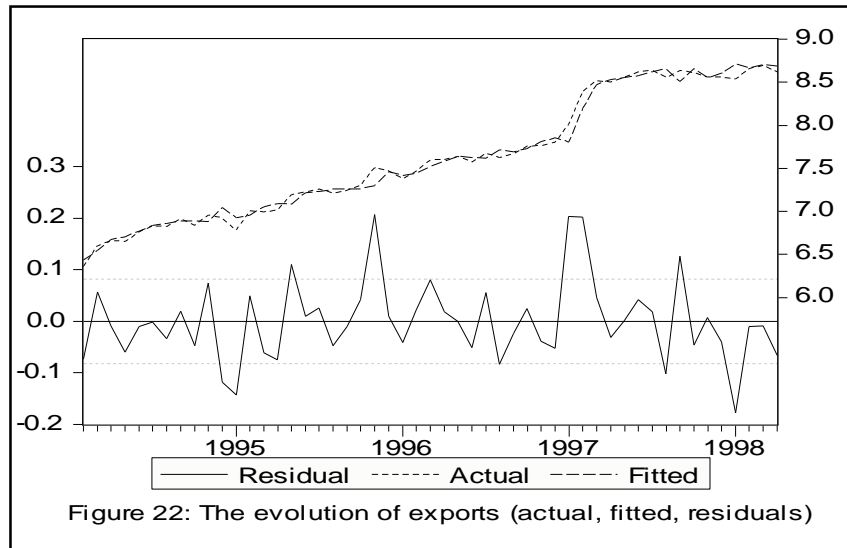
=====

$$\text{LOG(EXPORT)} = -0.44436759 + 0.4917360017*\text{LOG(EXR(-1))} + 0.1200115359*\text{LOG(VAT)} + 0.376674015*\text{LOG(EXPORT(-1))} + 0.456005701*\text{LOG(MU(-1))}$$

Table 2 : Regression Results of Exports as a Dependent Variable

Dependent Variable: LOG(EXPORT)				
Method: Least Squares				
Date: 08/09/99 Time: 10:18				
Sample(adjusted): 1994:02 1998:04				
Included observations: 51 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.444368	0.235985	-1.883033	0.0660
LOG(EXR(-1))	0.491736	0.115139	4.270787	0.0001
LOG(VAT)	0.120012	0.060021	1.999495	0.0515
LOG(EXPORT(-1))	0.376674	0.130547	2.885352	0.0059
LOG(MU(-1))	0.456006	0.131617	3.464631	0.0012
R-squared	0.987864	Mean dependent var		7.623983

Adjusted R-squared	0.986809	S.D. dependent var	0.713181
S.E. of regresion	0.081911	Akaike info criterion	-2.073471
Sum squared resid	0.308634	Schwarz criterion	-1.884076
Log likelihood	57.87351	F-statistic	936.0978
Durbin-Watson stat	1.832327	Prob(F-statistic)	0.000000



The negative sign of the intercept shows that exports cannot be realised unless a threshold level of activity is present in the economy (corresponding to the highest level of domestic demand). The exchange rate positively influences exports because the depreciation of domestic currency is equivalent to a price reduction of goods produced at home. The value added tax also has a positive effect on the amount of goods exported because of exemptions provided to exporters. A higher tax rate induces a reorientation of production towards foreign markets. Lagged exports contribute positively to the current level of exports because of two factors: market conventions and the spread of the total amount of exported goods over several periods of time. The money multiplier (MU) is a proxy for monetary policies undertaken by the central bank. Its influence on exports is due to the inflationary component of the multiplier: higher inflation in the economy is equivalent to a real depreciation of the currency and therefore stimulates exports.

The evolution of Romanian imports (expressed in ROL) is determined by the amount of foreign exchange reserves (FD), industrial production expressed in nominal terms (YIN), the gross average wage in the economy (GAW), and the value added tax (the regression results are provided in Table 3 and the actual, fitted, respectively residual values in Figure 23).

Estimation Equation:

=====

$$\text{LOG(IMPORT)} = C(1)*\text{LOG}(\text{FD}(-1)) + C(2)*\text{LOG}(\text{YIN}(-1)) + C(3)*\text{LOG}(\text{GAW}(-1)) + C(4)*\text{LOG}(\text{VAT}(-1))$$

Substituted Coefficients:

=====

$$\text{LOG(IMPORT)} = 0.5991612362 \cdot \text{LOG(FD(-1))} + 1.085233552 \cdot \text{LOG(YIN(-1))} + 0.6051341664 \cdot \text{LOG(GAW(-1))} - 0.2370754615 \cdot \text{LOG(VAT(-1))}$$

The positive influence of foreign exchange reserves is obvious, since this variable very often expresses the number of periods for which imports can be provided to economic agents. When the level of reserves increases, the domestic currency appreciates, which is equivalent to cheaper imports. Industrial production also contributes to the amount of imported commodities because of the previously discussed Romanian dependence on imports--mainly raw materials. When industrial activity is expanding, enterprises need a higher quantity of inputs. Industrial production is therefore a proxy for the demand coming from domestic producers, while gross average wage, approximating the disposable income, is a measure of consumer demand for imports. Evidently, the value added tax has a negative influence on the amount of imported goods because imports are not exempted from this tax.

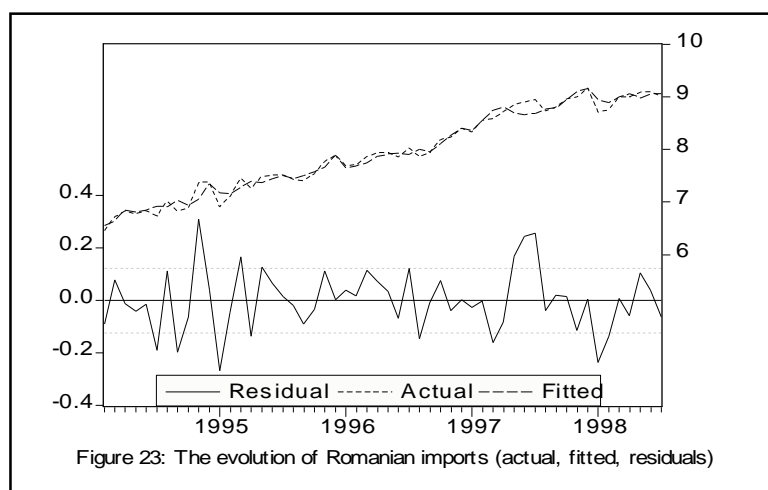
To reiterate, Romanian foreign trade, despite its correlation with the GDP level, depends to a lower extent on effective economic activity. Only imports are influenced by industrial production. Both exports and imports are dependent on other exogenous factors, like the value added tax, foreign exchange reserves, and the money multiplier. The exchange rate and inflationary elements therefore play a significant role in foreign commercial transactions. Imports are highly dependent on the demand from producers (for inputs) and from consumers (consumption commodities), while exports are mainly determined by ad-hoc factors. This reveals the fragility of the economy and the ineffectiveness of foreign trade policies.

This situation is determined by the fact that the economy is insufficiently adapted to competitiveness criteria that would reveal the comparative advantage of the country on international markets. At the same time, economic activities are incompletely restructured in terms of export and import composition, efficiency, and optimal market orientation.

Table 3: Regression Results with Imports as a Dependent Variable

Dependent Variable: LOG(IMPORT)				
Method: Least Squares				
Date: 08/09/99 Time: 13:17				
Sample(adjusted): 1994:02 1998:07				
Included observations: 54 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(FD(-1))	0.599161	0.085176	7.034362	0.0000
LOG(YIN(-1))	1.085234	0.174888	6.205293	0.0000
LOG(GAW(-1))	0.605134	0.105198	5.752317	0.0000
LOG(VAT(-1))	-0.237075	0.099887	-2.373425	0.0215
R-squared	0.974513	Mean dependent var		7.946244
Adjusted R-squared	0.972984	S.D. dependent var		0.798165
S.E. of regression	0.131190	Akaike info criterion		-1.153153
Sum squared resid	0.860541	Schwarz criterion		-1.005821
Log likelihood	35.13513	F-statistic		637.2740

Durbin-Watson stat	1.914381	Prob(F-statistic)	0.000000
--------------------	----------	-------------------	----------



4. Conclusions and Policy Recommendations

The analysis of the evolution and current situation of Romanian foreign trade leads to several conclusions regarding the existing potential of the economy within the international framework of commercial transactions.

1. The trading capacity is limited by a relatively highly inefficient level of economic activities. Both imports and exports record a steady state level at which the value of imported goods exceeds the total value of exports by 15%. The resulting trade deficit affects the balance of payments more and more because of inefficient policies to promote foreign investment and a remaining lack of credibility for economic policies.
2. During the first decade of transition, Romanian foreign trade has known a complex process of adjustment. A geographical reorientation has taken place, with Romania carrying out most of its foreign transactions with developed countries--the EU playing the most important role. At the same time, a new structure of traded commodities has been adopted which is aimed to better exploit the comparative advantage of the country.
3. Although significantly reoriented, Romanian foreign trade remains unstable, poorly restructured, and less competitive compared to other transition countries. As a consequence, Romania lost important market share with Western European partners, many of them being traditional clients during the socialist period. This situation is determined by the slow pace of improvement in the terms of trade and the quality of domestically produced goods that are destined to be exported.
4. The commodity structure of foreign trade reveals a high degree of substitution with respect to imported goods: a significant proportion of imports represents commodities

that are equally exported. The import of technology, although significant, does not lead to an efficient restructuring of industrial activities, the sector with the most important participation in foreign trade. Consequently, without a significant improvement of efficiency, the growing potential of the economy remains sub-optimal. Foreign trade does not contribute sufficiently to the development of the Romanian economy and, at the same time, the economy is not able to recover sufficiently in order to improve its terms of trade on the world markets.

5. The economic factors determining the dynamics of imports and exports are highly transitory. Exchange rate fluctuations and domestic inflation influence the amount and value of goods transacted to a great extent. Imports have more normal behaviour (economically). The demand from consumers and producers plays an essential role in the quantities bought from external markets. However, exports are influenced by collateral factors (VAT, money multiplier), implying the existence of an improper economic environment and therefore inconsistent policies for stimulating export activities.

Given the above particularities, a significant improvement of foreign trade capacity is not possible without major changes in the current structure of economic activities, with an important accent on structural reforms. Transition is far from being accomplished in Romania: public enterprises still benefit from monopoly privileges and high protectionism from the state in the form of direct and indirect subsidies, allowed arrears and forgiveness of debts; the private sector is insufficiently developed and its contribution to foreign trade consists mainly of intermediary activities between domestic and foreign producers; institutional restructuring is slow, legislative framework ineffective and promotional policies weak.

The trade balance cannot improve as long as government borrowings from abroad are misused, altering the credibility and impeding the penetration of foreign investment in the economy. The exchange rate policy must stimulate the exports but this is possible only if appreciation and/or depreciation are fully determined by the economic performance of enterprises.

The composition of imports should reflect the potential of the economy to a higher extent: a resource-oriented regime of trade is beneficial only if those resources are not directed to loss-making state companies (SIGEX Galati, for instance) or to less efficient activities. The state must reduce and eliminate its intervention in the economy through input provisions at quasi-subsidised prices, therefore allowing competition within the economy. Internal competition (mainly between public and private firms) will improve the overall competitiveness of the country on the world markets.

Exports cannot be directly influenced by the state, but an efficient set of measures aimed to promote this activity is imperiously necessary--special credits or credits at lower interest rates, preferential exchange rates, tax reductions and exemptions, fiscal facilities, etc.

Foreign direct investment represents a major determinant of foreign trade improvement. Romania records the lowest level of FDI's per capita among other Central and East European transition countries. Without a significant inflow of capital coming from foreign investors, economic development is too slow, negatively influencing foreign trade capacity and, consequently, the further development possibilities of the country. The existing legislative, institutional and political framework does not provide enough incentives for a radical improvement of the situation in this respect.

REFERENCES

Brenton, Paul: Trade & Investment in Europe. The Impact of the Next Enlargement. CEPS, Brussels 1999.

Havrylyshyn, Oleh; Al-Atrash, Hassan: Opening Up and Geographic Diversification of Trade in Transition Economies. IMF Working Paper no. 98/22, February 1988.

Kaminski, Bartlomiej; Wang, Zhen Khun; Winters, Alan: Export Performance in Transition Economies. Economic Policy 23, October 1996.

Krugman, Paul; Obstfeld, Maurice: International Economics. Theory and Policy. Addison-Wesley, 1997 (fourth edition).

Linneman, H: An Econometric Study of International Trade Flows North-Holland, Amsterdam 1966.

Maliszewska, Maryla: Romanian Trade:Recent Developments and Simulations for 1998. CASE Working Paper, Warsaw 1999.

List of Commodities Used for Computing the Index of Structural Adjustment

1. Live Animals and Animal Products
2. Vegetable Products
3. Animal or Vegetable Oils and Fats
4. Foodstuffs, Beverages, Tobacco
5. Mineral Products
6. Chemical Products
7. Plastics, Rubber and Related Items
8. Undressed Hides and Skins, Dressed Leather, Furs and Products
9. Wooden Products, Excluding Furniture
10. Wood Pulp, Paper, Cardboard and Articles Thereof
11. Textiles and Articles Thereof
12. Footwear and Articles Thereof
13. Stone, Plaster, Cement, Ceramics
15. Common Metals and Articles Thereof
16. Machinery—Appliances and Electric
17. Transport Means
18. Optical Products, Photographic Products, Precision Products, Medical Items, Clocks and Watches, Musical Instruments
20. Miscellaneous

Groups of Commodities According to the Level of Complexity**High:**

- 16 Machinery—Appliances and Electric
- 17 Transport Means
- 18 Optical Products, Photographic Products, Precision Products, Medical Items, Clocks and Watches, Musical Instruments

Medium:

- 6 Chemical Products;
- 7 Plastics, Rubber and Related
- 10 Wood pulp, Paper, Cardboard and Articles Thereof
- 11 Textiles and Articles Thereof
- 12 Footwear and Articles Thereof

Low:

- 5 Mineral Products
- 8 Undressed Hides and Skins, Dressed Leather, Furs and Products
- 9 Wooden Products, Excluding Furniture
- 13 Stone, Plaster, Cement, Ceramics
- 15 Common Metals and Articles Thereof